ABSTRACT OF THE DISCLOSURE

The disclosure relates to methods for ascertaining the corrosion resistant effectiveness of a silica containing film or layer upon a metal surface. The disclosed methods employ colormetric as well as chemical leaching processes. The effectiveness of the silica containing film or layer is dependent upon the uniformity, lack of porosity, micro-cracks, among other potential defects in the silica containing film or layer that affect the ability of the film or layer to protect an underlying metal surface from corrosive environments.